

April 1983

8-6

Use of Prestressed
Concrete Deck
Panel Stay-in-Place
Forms

MEMO TO DESIGNERS:

Bridge Standard Detail Sheets have been developed to provide the contractor an optional method of deck construction on suitable projects. This method used precast-prestressed deck panels as a stay-in-place form that works compositely with the cast-in-place deck.

Other States, such as Texas, find this option often selected because it provides greater safety to the workmen and the traveling public than conventional construction methods.

Bridge Standard Detail Sheets are set up for insertion into precast concrete girder and steel girder bridge plans meeting the following criteria:

Criteria:

1. Effective slab span shall not exceed 10'-0".
2. Anticipated adjustments in bearing seat elevations and profile grade shall not impair minimum vertical clearances.
3. Steel girders shall all be parallel, i.e., no variable girder spacing.
4. Steel girder flanges shall be wide enough to provide full embedment for shear connectors in cast-in-place concrete.
5. Shear connectors shall extend at least 1 1/2" above plane of the deck panels and shall clear the stay-in-place panel by 1".
6. Cast-in-place deck concrete shall be thick enough to provide required clearance to reinforcement and shall provide full embedment and development of longitudinal deck bars on continuous structures. Longitudinal deck bars may rest on deck panels. However, if clearance between these bars and deck panels is less than 1 inch, development of bars shall be increased 10%.
7. Required thickness of fiber board filler due to 1/2" minimum plus variation in flange thickness plus cross slope shall not exceed 3".

NEW MEMO

8. Structural section shall have adequate capacity for extra dead load of thicker slabs.

When this option is included on a Precast "I" Girder project, add "Precast-Prestressed Concrete Panel Stay-in-Place Form Option" decal to Standard Plan 20-80.

Standard Special Provision covering this work shall also be included in the project documents.

The estimate of quantities will be based on the cast-in-place alternative.


George A. Hood


Guy D. Mancarti

MBO:njr